Physical Science **DSHS**

Name _____ Period_____

Relative Speed Worksheet

1. A swimmer has a velocity of 4 m/s **upstream** in a river that is flowing at 2 m/s. What is the relative speed of the swimmer?

2. A plane is flying at 100 m/s north and passes by a plane that is moving of 20 m/s to the south. What is their relative speed to each other?

3. A sailboat is on a heading of East at 5 m/s, the sailboat is traveling behind a speedboat that is headed East at 13 m/s. What is their speed relative to each other?

4. A plane leaves Atlanta flying northeast at 100 m/s. Another plane leaves Atlanta flying southwest at 150 m/s. What is their speed relative to each other?

5. A swimmers path appears to be going directly across a river at 1.5 m/s. A dog is swimming across the same river in the same direction at 2 m/s. What is the speed of the dog relative to the swimmer?

6. Two cars are driving down I-71 S at 70 miles per hour. What is the relative speed of the cars to each other?

Physical Science **DSHS**

Name _____ Period_____

What did we learn from our Relative Speed Lab?

1. For an observer to contribute to the relative speed, the observer must be in _____.

2. If an observer is at rest, the relative speed of an object moving is:

a. Faster than its actual speed
b. Slower than its actual speed
c. Equal to its actual speed

3. If an observer is moving towards a moving object that is moving towards it, the relative speed of the moving object is:

a. Faster than its actual speed
b. Slower than its actual speed
c. Equal to its actual speed

4. If an observer is moving away from an object and that object is moving away from the observer, the relative speed of the moving object is:

a. Faster than its actual speed
b. Slower than its actual speed
c. Equal to its actual speed

5. If an observer is moving toward an object that is moving ahead of it in the same direction, the relative speed of the object is:

a. Faster than its actual speed
b. Slower than its actual speed
c. Equal to its actual speed

6. If an observer is moving away from an object that is moving towards it in the same direction, the relative speed of the object is:

a. Faster than its actual speed
b. Slower than its actual speed
c. Equal to its actual speed

7. To find the relative speed of objects moving towards each other or away from each other (or the speed of objects moving in OPPOSITE directions), we must:

a. add the speeds of the moving objects
b. subtract the speeds of the moving objects

8. To find the relative speed of objects moving in the SAME direction as one another, we must:

a. add the speeds of the moving objects
b. subtract the speeds of the moving objects